Claim Amendments

1. (Original) A system for increased data transfer rate comprising:

at least one buffer, the at least one buffer receiving a digital signal waveform, the digital signal waveform containing one bit of information for every bit time of the digital signal waveform, the at least one buffer buffering every three bits of the digital signal waveform; and

an encoder, the encoder encoding every buffered three bits of the digital signal waveform producing an encoded waveform that contains three bits of information for each bit time of the digital signal waveform, the encoding increasing the data transfer rate of the digital signal waveform.

2. (Original) The system according to claim 1, further comprising a decoder, the decoder decoding the encoded waveform producing three bits of the digital signal waveform containing one bit of information for every bit time of the digital signal waveform.

3. (Original) The system according to claim 2, further comprising a second buffer, the second buffer receiving the digital signal waveform produced from the decoder.

4. (Original) The system according to claim 1, further comprising at least one driver device operably connected to the encoder and at least one receiver device operably connected to the decoder, the at least one driver device transferring the encoded waveform across a transmission medium to the at least one receiver.

5. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform are >000', the encoded waveform comprising two sections where the first section is at a zero level and the second section is at a zero level.

6. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >001', the encoded waveform comprising two sections where the first section is at a zero level and the second section is a negative pulse.

7. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >010', the encoded waveform comprising two sections where the first section is a negative pulse and the second section is at a zero level.

8. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >011', the encoded waveform comprising two sections where the first section is a negative pulse and the second section is a negative pulse.

9. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >100', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is a negative pulse.

10. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >101', the encoded waveform comprising two sections where the first section is at a zero level and the second section is a positive pulse.

11. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >110', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is at a zero level.

12. (Original) The system according to claim 1, wherein the buffered three bits of the digital signal waveform comprise >111', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is a positive pulse.

13. (Currently Amended) A method for increasing data transfer rate comprising:

receiving a digital signal waveform, the digital signal waveform containing one bit of information for every bit time of the digital signal waveform;

buffering the digital signal waveform three bits ~~bit~~ at a time;

encoding each buffered three bits of the digital signal waveform producing an encoded waveform of the buffered three bits of the digital signal waveform that contains three bits of information for each bit time of the digital signal waveform, the encoding increasing the data transfer rate of the digital signal waveform.

14. (Original) The method according to claim 13, further comprising sending the encoded waveform from a first device to a second device across a transmission medium.

15. (Original) The method according to claim 14, further comprising:

receiving the encoded waveform at the second device;

decoding the encoded waveform at the second device, the decoding producing three bits of the digital signal waveform containing one bit of information for every bit time of the digital signal waveform.

16. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >000', the encoded waveform comprising two sections where the first section is at a zero level and the second section is at a zero level.

17. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >001', the encoded waveform comprising two sections where the first section is at a zero level and the second section is a negative pulse.

18. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >010', the encoded waveform comprising two sections where the first section is a negative pulse and the second section is at a zero level.

19. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >011', the encoded waveform comprising two sections where the first section is a negative pulse and the second section is a negative pulse.

20. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >100', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is a negative pulse.

21. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >101', the encoded waveform comprising two sections where the first section is at a zero level and the second section is a positive pulse.

22. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >110', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is at a zero level.

23. (Original) The method according to claim 13, wherein the buffered three bits of the digital signal waveform comprise >111', the encoded waveform comprising two sections where the first section is a positive pulse and the second section is a positive pulse.

24. (Original) A method for encoding comprising at least one of:

encoding three bits comprising >000' of a digital signal waveform into an encoded waveform comprising two sections where the first section is at a zero level and the second section is at a zero level;

encoding three bits of a digital signal waveform comprising >001' into an encoded waveform comprising two sections where the first section is at a zero level and the second section is a negative pulse;

encoding three bits of a digital signal waveform comprising >010' into an encoded waveform comprising two sections where the first section is a negative pulse and the second section is at a zero level;

encoding three bits of a digital signal waveform comprising >011' into an encoded waveform comprising two sections where the first section is a negative pulse and the second section is a negative pulse;

encoding three bits of a digital signal waveform comprising >100' into an encoded waveform comprising two sections where the first section is a positive pulse and the second section is a negative pulse;

encoding three bits of a digital signal waveform comprising >101' into an encoded waveform comprising two sections where the first section is at a zero level and the second section is a positive pulse;

encoding three bits of a digital signal waveform comprising >110' into an encoded waveform comprising two sections where the first section is a positive pulse and the second section is at a zero level; and

encoding three bits of a digital signal waveform comprising >111' into an encoded waveform comprising two sections where the first section is a positive pulse and the second section is a positive pulse, and

wherein the encoding increases the data transfer rate of the digital signal waveform.

25. (Original) The method according to claim 24, further comprising buffering each three bits of the digital signal waveform before the encoding.

26. (Original) A method for decoding comprising at least one of:

decoding an encoded waveform comprising two sections where the first section is at a zero level and the second section is at a zero level into three bits of a digital signal waveform comprising >000';

decoding an encoded waveform comprising two sections where the first section is at a zero level and the second section is a negative pulse into three bits of a digital signal waveform comprising >001';

decoding an encoded waveform comprising two sections where the first section is a negative pulse and the second section is at a zero level into three bits of a digital signal waveform comprising >010';

decoding an encoded waveform comprising two sections where the first section is a negative pulse and the second section is a negative pulse into three bits of a digital signal waveform comprising >011';

decoding an encoded waveform comprising two sections where the first section is a positive pulse and the second section is a negative pulse into three bits of a digital signal waveform comprising >100';

decoding an encoded waveform comprising two sections where the first section is at a zero level and the second section is a positive pulse into three bits of a digital signal waveform comprising >101';

decoding an encoded waveform comprising two sections where the first section is a positive pulse and the second section is at a zero level into three bits of a digital signal waveform comprising >110'; and

decoding an encoded waveform comprising two sections where the first section is a positive pulse and the second section is a positive pulse into three bits of a digital signal waveform comprising >111'.

27. (Original) The method according to claim 26, further comprising buffering each three bits of the digital signal waveform after the decoding.